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Promotion and protection of human rights: human rights questions, including alternative approaches for improving the effective enjoyment of human rights and fundamental freedoms

Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes*

Note by the Secretary-General

The Secretary-General has the honour to transmit to the General Assembly the report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, Baskut Tuncak, submitted pursuant to Human Rights Council resolution 36/15.

* The present report was submitted after the deadline in order to reflect the most recent developments.



Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes*Summary*

In his first report to the General Assembly, the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes introduces the mandate, highlights recent activities and offers recommendations for ongoing international discussions. The Special Rapporteur explains the link between the mandate and achieving the Sustainable Development Goals and brings to the fore the need for a stronger, more comprehensive global framework to protect human health from a toxic environment to help address the injustices resulting from divergent standards of protection between countries. The Special Rapporteur offers recommendations for the post-2020 framework for toxic chemicals and waste that in his view would strengthen the ability of the global community to protect human rights from toxic exposures and highlights the potential contribution of the business and human rights discourse to the issues at hand.

I. Introduction

1. The mandate on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes is in large part about the extent to which we have a right to control the entry of hazardous substances and wastes into our bodies. The vast majority of the global population lives on the wrong side of a toxic divide, exposed without their consent to hazardous substances and wastes that increase their likelihood of developing diseases and disabilities throughout their lives. For example, 91 per cent of the world's population lives in areas that exceed World Health Organization (WHO) guidelines for air pollution.¹

2. Pollution is estimated to be the largest source of premature death in the developing world,² approximately three times more than HIV/AIDS, tuberculosis and malaria combined. Air pollution kills about 7 million people annually, amounting to 1 in 9 deaths, with 4.2 million deaths from ambient outdoor air and 3.8 million from exposure to smoke from dirty cookstoves and fuel.³ Workers continue to be exploited by exposure to unsafe levels of toxic chemicals and other hazardous substances. Over 2 million workers die every year from occupational diseases, nearly 1 million from toxic exposures alone (see A/HRC/39/48). Many of the figures of death, disease and disability are believed to be an underestimation. The transfer of polluting industries, manufacturing activities and supply chains from wealthier countries to those with lower levels of protection contributes greatly to these adverse impacts on life and health.⁴

3. Improved technologies and methodologies have helped to visualize the pervasive nature of our invisible and incessant exposure to hazardous substances in the air we breathe, the water we drink, the food we eat, our homes and the places we work, as well as the countless products we consume. Through these advancements, our understanding of the adverse impacts of hazardous substances and wastes on our "right to ... adequate conditions of life"⁵ has expanded, and a misperception of so-called harmless exposures has been uncovered.

4. It is now well demonstrated that babies around the world are born "pre-polluted" (A/HRC/33/41). Over 200 hazardous substances have been detected in umbilical cords and the placenta, including toxic constituents of consumer products, food packaging and air pollution. Not only are children exposed during sensitive periods to a multitude of substances with known and unknown toxicity from a plethora of sources, but they are also exposed at higher levels than adults (*ibid.*). Millions of children are deprived of their right to maximum development by exposure to hazardous substances before they can even begin to exercise their fundamental right to be heard.⁶

¹ See www.who.int/airpollution/en/.

² See the report of the Lancet Commission on pollution and health.

³ See www.who.int/airpollution/en/; see also A/HRC/30/40.

⁴ See, for example, Haikun Wang and others, "Trade-driven relocation of air pollution and health impacts in China", *Nature Communications*, vol. 8, article No. 738 (2017).

⁵ In 1972, the United Nations Conference on the Human Environment proclaimed the common conviction that people have the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being and that they bear a solemn responsibility to protect and improve the environment for present and future generations. (Declaration of the United Nations Conference on the Human Environment, A/CONF.48/14/Rev.1, part one, chap. I).

⁶ Convention on the Rights of the Child, art. 12.

5. Over time, exposure levels of concern have been revised lower as investigators have used more sensitive measures and better study designs.⁷ For example, before the mid-1960s, a blood lead level above 60 micrograms per decilitre ($\mu\text{g/dL}$) was considered toxic. By 1978, the defined level of toxicity had declined 50 per cent to 30 $\mu\text{g/dL}$. Since then the "safe" level of exposure has progressively been revised lower. Today national bodies, such as the United States Centers for Disease Control and Prevention and WHO, consider there to be no safe level of childhood lead exposure, with exposure of 5 $\mu\text{g/dL}$ associated with neurobehavioral damage.⁸ It was estimated in 2016 that lead exposure globally accounted for 540,000 deaths and 13.9 million years of healthy life lost.⁹

6. Through other advancements, we have a clearer picture of the intricate subtleties of how chronic exposure to a multitude of toxic substances during childhood and other sensitive periods of development can manifest over time into various adverse health outcomes, such as cancer, diabetes, birth defects, reduced intelligence and learning disabilities, asthma and other respiratory diseases. Experiments have demonstrated that exposures to combinations of substances at levels not predicted to have adverse effects can result in adverse effects. This has cast doubt on the conventional paradigm that seeks thresholds for no observed adverse effects as the basis for defining safety.

7. Seemingly every day we continue to uncover the myriad of ways we are subjected to a vast human experiment of incessant exposure to toxic substances, contrary to the clear right not to be subject to scientific experimentation without consent.¹⁰ Reports continue to illustrate trends of increasing incidences of health impacts arising from exposure to hazardous substances, but leave unanswered which exposure or exposures are responsible.¹¹ Illustrating the existential dimension of the problem is the decades of evidence of declining sperm counts observed in countries around the globe.¹²

8. Protection from exposure to hazardous substances is fundamentally about the rights to life, non-discrimination and bodily integrity, and is dependent on the realization of everyone's right to information, meaningful participation and freedoms of association and assembly, as well as the right to an effective remedy, among others (see, for example, A/HRC/36/41).

9. The issue of exposure is also deeply interwoven with the discourse on our rights to health, safe food and water, adequate housing and safe and healthy working conditions, as well as a healthy environment, to name a few. However, in relation to these rights, it must be emphasized that the Committee on Economic, Social and Cultural Rights interprets the obligations and responsibilities of duty bearers as being

⁷ Lead is a poison that affects virtually every system in the body and is particularly harmful to the developing brain and nervous system of fetuses and young children (see Centers for Disease Control and Prevention, available at www.cdc.gov/nceh/lead/publications/books/plpyc/chapter2.htm).

⁸ WHO, *Childhood Lead Poisoning*, Geneva, 2010, available at www.who.int/ceh/publications/leadguidance.pdf.

⁹ WHO, "Lead poisoning and health", fact sheet, 22 August 2018, available at www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health.

¹⁰ International Covenant on Civil and Political Rights, art. 7.

¹¹ See, for example, United States, Environmental Protection Agency, *America's Children and the Environment*, 3rd ed. (Washington, D.C., January 2013).

¹² Hagai Levine and others, "Temporal trends in sperm count: a systematic review and meta-regression analysis", *Human Reproduction Update*, vol. 23, No. 6 (November–December 2017). Available at <https://doi.org/10.1093/humupd/dmx022>.

to prevent and minimize exposure to hazardous substances and to respect the individual's right to bodily (physical) integrity.¹³

10. What we know today, including existing evidence of harm, knowledge of risks and the inherent uncertainties, requires a human rights-based approach that emphasizes the duty and responsibilities of States and businesses to prevent and minimize exposure. While science plays an essential role in advancing protection from exposure, a perverse version of a "science-based approach" has prevented progress in many cases regarding the prevention and minimization of exposure,¹⁴ contrary to human rights standards.

11. There are ample opportunities to reduce avoidable and unjustified exposures to hazardous and potentially hazardous substances. From both technological and policy perspectives, we have the tools to prevent and minimize exposure, often at levels below what is identified as a health risk (A/HRC/36/41). The particularly heinous nature of the exploitation of workers and communities through exposure is that there are almost always alternatives to prevent or minimize exposure. Solutions to this abuse of human rights are available, should States choose to compel businesses to adopt them.

12. To this end, efforts by States to move towards a "non-toxic environment" for present and future generations are commendable. Such initiatives are highly compatible with the State's duty to respect, protect and fulfil the many interrelated and interdependent human rights implicated by hazardous substances and wastes. For example, Sweden's national objective of a non-toxic environment, adopted by the Government with the participation of civil society and businesses, seeks to ensure that "total exposure to chemical substances via all sources of exposure is not harmful to people or biodiversity."¹⁵ It also seeks to ensure that knowledge and information is available and accessible, consistent with the right to information.¹⁶ And, it seeks to ensure the remediation of contaminated sites, which is part of an effective remedy.¹⁷ A European Union-wide non-toxic environment strategy, due in 2018, presents a welcome opportunity to help close many protection gaps for children and other vulnerable groups.¹⁸

13. However, more is required, nationally, regionally and globally. The exposure of the most vulnerable in society to toxic exposure is a global problem, in which we are all to some degree complicit, whether as policymakers, employers or consumers.

II. Recent activities of the mandate

14. This is the first report of the mandate holder to the General Assembly since the establishment of the mandate in 1995 by the former Commission on Human Rights. Over the years, the mandate has evolved through successive resolutions of the Human Rights Council to examine the impacts of hazardous substances and wastes throughout their life cycles, from extraction to production, use, emission and final

¹³ Committee on Economic and Social Rights, general comments No. 14 and No. 18.

¹⁴ David Michaels, *Doubt is Their Product: How Industry's Assault on Science Threatens Your Health* (Oxford University Press, New York, 2008).

¹⁵ Swedish Environmental Protection Agency, "Specifications for a non-toxic environment", available at www.swedishepa.se/Environmental-objectives-and-cooperation/Swedens-environmental-objectives/The-national-environmental-objectives/A-Non-Toxic-Environment/Specifications-for-A-Non-Toxic-Environment/.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ European Commission, 7th Environment Action Programme, "Study for the strategy for a non-toxic environment", final report, p. 122. Available at <http://ec.europa.eu/environment/chemicals/non-toxic/pdf/NTI%20main%20report%20final.pdf>.

disposal. Under the mandate, issues of both occupational health and environmental health perspectives have been examined. The most recent reports of the current mandate holder to the Human Rights Council are summarized below.

A. Reports to the Human Rights Council

1. Workers' rights (2018)

15. Exploitation can take many forms. A particularly vicious form of exploitation is the exposure of workers to toxic substances.

16. In September 2018, the Special Rapporteur presented a report highlighting the global crisis confronting workers exposed to toxic chemicals (see A/HRC/39/48 and A/HRC/39/48 Corr.1). He outlined key challenges and proposed 15 principles to help States, businesses and other key actors to protect workers from toxic occupational exposures and to provide remedies for violations of their rights. The report includes a detailed annex on various cases addressed by the mandate since 2007.

17. Global estimates from the International Labour Organization show that over 2,780,000 workers die from unsafe or unhealthy conditions of work each year. Despite clear human rights obligations relating to the protection of their health, workers around the world find themselves in the midst of a crisis — it is estimated that one worker dies at least every 30 seconds from exposure to toxic chemicals, pesticides, radiation and other hazardous substances. Yet incidences of exposure are grossly underreported in some contexts and countries.

18. Every worker has the right to dignity, ethical treatment and respect, as well as protection from conditions of work that are dehumanizing or degrading. The right to safe and healthy work is a right in itself; however, it also encompasses many other interrelated and interdependent human rights of workers, including the rights to life, health, bodily (physical) integrity and security of the person. They are indivisible from the rights to information, meaningful participation and freedoms of expression, assembly and association, as well as the right to an effective remedy.

2. Good practice guidelines (2017)

19. In September 2017, the Special Rapporteur delivered a long-standing request of the Human Rights Council: a report on guidelines to good practices (see A/HRC/36/41). These guidelines are intended to help States, businesses, civil society, trade unions and other key actors to identify and address fundamental problems that give rise to human rights abuses due to toxics.

20. The guidelines to good practices build on the Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework, recognizing that the challenges presented are most typically related to business conduct. Thus, the report is divided into three sections, namely the duties of States, the responsibilities of businesses, and access to justice and remedy, concluding with recommendations with respect to each.

3. Pesticides and the right to food (2017)

21. The mandate holder collaborated with the Special Rapporteur on the right to food to provide an account of global use of hazardous pesticides in agriculture and its impact on human rights (see A/HRC/34/48).

22. The report found that while scientific research confirms the adverse effects of pesticides, proving a definitive link between exposure and human diseases or conditions, or harm to the ecosystem, presents a considerable challenge. This

challenge has been exacerbated by a systematic denial, fuelled by the pesticide and agroindustry, of the magnitude of the damage inflicted by these chemicals, and aggressive, unethical marketing tactics that remain unaddressed.

23. The report notes with concern the problem of double standards of protection from pesticides between countries. Many low- and middle-income countries continue to use hazardous pesticides banned by high-income countries, which in some cases continue to export hazardous pesticides for the production of agricultural products that are then imported back. This transfer of polluting industries and hazardous work is exploitation. The volume of pesticide consumption in developing countries is large and has rapidly increased, with regular reports of serious impacts to the health of workers, local communities and ecosystems.

24. Without or with minimal use of toxic chemicals, it is possible to produce healthier, nutrient-rich food, with higher yields in the longer term, without polluting and exhausting environmental resources. The solution requires a holistic approach to the right to adequate food that includes phasing out dangerous pesticides and enforcing an effective regulatory framework grounded on a human rights approach, coupled with a transition towards sustainable agricultural practices that take into account the challenges of resource scarcity and climate change.

25. To this end, it is recommended in the report that States work towards a comprehensive, binding treaty to regulate hazardous pesticides throughout their life cycle, taking into account human rights principles. In the interim, it also recommends several good practices for States at the national level.

4. Rights of the child and childhood exposure (2016)

26. In 2016, the Special Rapporteur described the urgent need for States and businesses to meet their obligations and responsibilities under the Convention on the Rights of the Child regarding air, water and soil pollution, as well as the presence of toxic chemicals in food and consumer products (see A/HRC/33/41). States have a human rights obligation to first and foremost prevent childhood exposure to pollution and toxic substances, with mitigation measures only if prevention is not possible.

27. Children today are born "pre-polluted" with numerous contaminants that have an impact on their rights to survival and development, to be heard, to physical integrity and to health, among others. Representative studies have measured hundreds of toxic and otherwise hazardous chemicals in children in-utero and after birth through their mother's exposure. Exposure to toxics and pollution continues incessantly after birth. While the studies primarily come from certain countries, every child in every country is a victim of this "toxic trespass" to varying degrees. Many of these exposures are transboundary in origin, including emissions into air and water and global production, consumption and disposal patterns, requiring global action.

28. Paediatricians refer to a "silent pandemic" of disability and disease associated with exposure to toxics and pollution during childhood, many of which do not manifest themselves for years or decades after exposure. Over one million child victims die prematurely before the age of 5 each year, with estimates of premature death from air pollution alone exceeding 500,000. However, this is only the tip of the iceberg, with countless millions affected by preventable diseases and disabilities such as cancer, diabetes, learning disabilities and birth defects later in life. These health impacts exert massive economic costs on governments and individuals, which questions the arguments against stronger protections simply because of the possible impacts on economic growth.

5. Right to information (2015)

29. In September 2015, the current Special Rapporteur presented his first full thematic report to the Human Rights Council on the right to information in the context of hazardous substances and wastes (A/HRC/30/40). Information is an enabler of many human rights that are affected by hazardous substances and wastes. Information is crucial to preventing human rights violations and abuses resulting from exposure to hazardous substances and wastes and realizing the right of victims of exposure to an effective remedy. However, vital information on hazardous substances and wastes is frequently unavailable and inaccessible, including information about their hazardous properties, exposure levels and incidences of diseases and other adverse health impacts.

30. The enjoyment of the right to information is critical in the context of toxics, in order to prevent adverse impacts, to ensure the realization of the right to freedom of expression and to enable individuals and communities to participate in decision-making processes and to seek and obtain remedy. Health and safety information about toxic chemicals must never be confidential. Information must be available, accessible, functional and consistent with the principle of non-discrimination in order for human rights to be respected, protected, enjoyed and fulfilled. Despite notable improvements in many countries over recent decades, the right to information remains insufficiently realized in the area of hazardous substances and wastes, particularly with respect to protecting the most vulnerable from the adverse impacts of exposure, whether from consumer products, at the workplace or via food, water, air or other sources.

31. The report clarifies the duties and responsibilities of States and businesses regarding the right to information in order to protect human rights affected by toxics. States are duty-bound to generate, collect, assess and update information; effectively communicate such information, particularly to those disproportionately at risk of adverse impacts; ensure confidentiality claims are legitimate; and engage in international cooperation to ensure that foreign Governments have the information necessary to protect the rights of people in their territory. In discharging their duty to conduct human rights due diligence, businesses are responsible for identifying and assessing the actual and potential impacts of hazardous substances and wastes, either through their own activities or as a result of their business relationships, and to communicate information to other businesses, governments and the public effectively.

B. Illustrative cases

32. Through communications to States and businesses, as well as country visits, the mandate holder has worked on various cases illustrating the impacts of toxics and pollution throughout the life cycle of consumption and production. These impacts are visible across various economic sectors and industrial activities. They illustrate violations and/or abuse of various human rights, particularly of the most vulnerable in society, including the rights of the child, older persons, workers, indigenous peoples, the poor and migrant and minority communities. The categories are hard to define, as the issues and sectors are often interlinked.

1. Air pollution

33. Air pollution is a major source of exposure to hazardous substances and wastes. In 2017, the Special Rapporteur issued a statement calling for strong, urgent action by States, including legislation and enforcement of corporate accountability, to ensure that people around the world can enjoy the human rights to life and health in environments free from contamination.¹⁹ The call was instigated by the findings of

¹⁹ The statement was subsequently endorsed by several other special rapporteurs and independent experts of the Human Rights Council. See www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?LangID=E&NewsID=21222.

the Special Rapporteur during several country visits, estimates by WHO of 7 million premature deaths due to air pollution and previous investigations into the realization of the rights of the child.

34. During his visit to the Republic of Korea, the Special Rapporteur highlighted the case of humidifier sterilizers marketed and sold without adequate investigation of their risks to human health and life (see A/HRC/33/41/Add.1). Unknowingly, consumers added the toxic product to water tanks of humidifiers, hugely popular in the Republic of Korea, resulting in toxic indoor air. The chemical mixture was marketed on the premise that it would promote health and well-being.

35. The actual number of victims is unknown and is still being evaluated. By December 2015, the Government had recognized that 95 people had died and 221 had suffered adverse health impacts after inhaling hazardous chemicals, mostly young children, pregnant women and the elderly. According to the Korea Environmental Industry and Technology Institute, a total of 6,179 individuals had been registered as victims by 26 October 2018. The number includes 1,357 cases of deceased individuals.²⁰ The largest seller of the humidifier sterilizers was the subsidiary in the Republic of Korea of a pharmaceutical company from the United Kingdom of Great Britain and Northern Ireland that certainly should have known the risks of inhaling chemical substances without evidence regarding their effects on health or their safety, regardless of the fact that it was in compliance with certain laws at the time. While a few companies have apologized, the mandate holder remains concerned regarding the inadequate accountability of the chemical companies that sold the chemical ingredients to companies marketing the humidifier sterilizers.

36. During various country visits, the issue of outdoor air pollution and its adverse health impacts, particularly for women of reproductive age, children and older persons, has been of grave concern. During a visit in 2017, the Special Rapporteur observed how air pollution continues to plague the United Kingdom (see A/HRC/36/41/Add.2). Over 40,000 premature deaths per year were estimated to occur in the country, with over 9,000 in London alone.

37. Recently, a mother delivered a petition with 100,000 signatures calling for a new inquest into her daughter's death, which she believes to be due to her daughter's exposure to air pollution. Ella died in February 2013 after suffering from extreme asthma and seizures for three years. During that time local air pollution levels breached European Union legal limits. Permissible exposure limits in member States of the European Union for various air pollutants currently exceed levels recommended by WHO. The case is important in many respects, including the challenge faced by victims of air pollution to establish a sufficient causal linkage between health impacts and air pollution exposure to access an effective remedy.

2. Contaminated land

38. The situation faced by Roma, Ashkali and Egyptian families displaced during the Kosovo conflict and housed by the United Nations in camps constructed on lead-contaminated toxic wasteland between 1999 and 2013, is of concern to the Special Rapporteur. The affected communities, including children, continue to suffer from long-term, serious damage to their health as a result of poisoning. They continue to live in conditions of economic hardship and social deprivation, hampering their access to adequate medical services. The Special Rapporteur addressed an open letter to the Secretary-General concerning his 2017 decision to establish a trust fund charged with implementing community-based assistance projects, which would benefit the affected communities, inquiring about the progress and functioning of the

²⁰ See www.healthrelief.or.kr/home/content/stats01/view.do.

trust fund.²¹ Despite expressions of political support by Member States, no financial contribution has yet been received by the international community. The Special Rapporteur calls on the United Nations and its Member States to mobilize the necessary resources without further delay.

3. Water pollution and contamination

39. In 2016, the mandate holder sent a joint communication²² to the Government of the United States of America and issued a public statement²³ with several other mandates holders regarding the situation of children suffering from lead contamination in Flint, Michigan, and elsewhere in the country. The case raised grave concerns regarding the injustice of pollution and contamination borne by poor and minority communities across the United States.

40. The Special Rapporteur issued numerous communications and statements regarding water pollution from the Formosa Ha Tinh Steel Corporation plant in April 2016 in Viet Nam. The resulting pollution discharge killed large volumes of fish on which local communities depended, both for sustenance and their livelihoods. Of grave concern is the harassment, detention and imprisonment of dozens of local journalists, bloggers and human rights defenders for expressing concern regarding the impacts of pollution and unhealthy working conditions, as well as the need for effective remedies. The Special Rapporteur together with other mandate holders addressed letters to the Government of Viet Nam, including regarding the conviction and sentencing of two human rights defenders, in what appeared to be retaliation for legitimate human rights work related to pollution caused by the toxic waste discharge.²⁴

4. Agricultural production

41. The Special Rapporteur has been concerned about the impacts of pesticides and other hazardous substances used in and produced for agriculture, which raises concerns of exposure resulting from air pollution and water contamination, as well as direct exposures, particularly of workers.

42. Exposure of children using or otherwise exposed to pesticides and other toxic substances at work is one of the worst aspects of child labour. This is a major concern that is repeatedly brought to the attention of the mandate holder from cases around the world. A related concern is the exposure of women of reproductive age to pesticides and other toxic chemicals at work, potentially during the early stages of pregnancy, sometimes before they even know they are pregnant, subjecting their children to the risk of various adverse health impacts. In a recent communication regarding tobacco production in Zimbabwe,²⁵ at least 10 foreign companies were identified as sourcing tobacco from farms where children are reportedly using or

²¹ See www.ohchr.org/Documents/Issues/ToxicWastes/LetterSGAshkaliEgyptianCommunities.pdf.

²² See <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gld=18467>. For replies from the State, see <https://spcommreports.ohchr.org/TMResultsBase/DownloadFile?gld=32453> and <https://spcommreports.ohchr.org/TMResultsBase/DownloadFile?gld=33284>.

²³ See www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=17139&LangID=E.

²⁴ See <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gld=23672>. For the reply from the State, see <https://spcommreports.ohchr.org/TMResultsBase/DownloadFile?gld=34029>.

²⁵ See <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gld=23765>.

mixing pesticides.²⁶ These tobacco companies are based in China, Germany, Japan, Switzerland, the United Arab Emirates, the United Kingdom and the United States.²⁷

43. During a recent visit to Sierra Leone (see A/HRC/39/48/Add.1), the Special Rapporteur observed that environmental impact assessments of a large-scale palm oil plantation, owned and operated by a Europe-based corporation, were devoid of meaningful information about pesticides use and their volumes from which to determine potential environmental and occupational risks. The Special Rapporteur was informed that the pesticides used included those disallowed from use in Europe and elsewhere, and is concerned by the limited capacity of the Government to monitor potential impacts of their use on health and water resources.

5. Extractive industries

44. The mandate holder continues to address numerous cases of alleged human rights violations and abuses as a result of the activities of extractive industries. In most cases, there are strong transnational links, whether related to foreign-owned operators or to resources that are processed and used in global supply chains.

45. These cases illustrate inadequate conduct of human rights due diligence for hazardous substances and wastes. In the case of the Mariana (also referred to as Samarco or Rio Doce) disaster, concerns were raised regarding the insufficiency of efforts to prevent what some have described as Brazil's worst environmental disaster. The flood of waste following the rupture of the dam killed at least 18 people and affected the lives of millions of people living along the 800 km Rio Doce watershed.²⁸ The mandate holder was particularly concerned with the lack of transparency by authorities and companies in disclosing crucial information regarding the danger posed by the dam to local communities and the unjustified subsequent statements that the waste spilled did not pose a health risk. Concerns continue to be raised regarding substantive and procedural aspects of the settlement and remedy process, including insufficient participation by affected communities and the inadequate progress made.²⁹

46. In 2016, the mandate holder undertook an unofficial visit to Peru to assess the situation of the indigenous peoples in the Amazon who continue to grapple with decades of toxic waste left by oil companies in their territories, which has been the subject of various communications by the mandate holder. The Special Rapporteur remains concerned that the Argentina-based company Pluspetrol has not fulfilled its obligation to remediate both its own oil contamination and the contamination left by its predecessor in Lot 192 (formerly Lot 1 A/B) decades ago. New agreements were reached for continued extraction without the completion of remediation and pipelines for oil transportation are in desperate need of replacement, with over 50 alleged incidences of rupture and further contamination in the past three years alone.

6. Chemical industries

47. Various manufacturers of industrial chemicals, pesticides, pharmaceuticals and other chemical products have been linked with human rights abuses resulting from the toxicity of their products, from unsafe conditions at facilities to widespread human

²⁶ See the Office of the United Nations High Commissioner for Human Rights (OHCHR) communications database at <https://spcommreports.ohchr.org/TMsearch/TMDocuments>.

²⁷ See OHCHR communications database at <https://spcommreports.ohchr.org/TMsearch/TMDocuments>.

²⁸ See <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gld=14484>.

²⁹ See <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gld=321>. For the reply from the State, see <https://spcommreports.ohchr.org/TMResultsBase/DownloadFile?gld=2093>.

contamination resulting from pollution, contamination and waste produced by their products. Over several decades, the global chemical industry has grown at astronomical rates, particularly in low- and middle-income countries.³⁰ The protection gaps and resultant impacts are apparent.

48. In 2015, a series of explosions in China killed at least 173 people, and resulted in over 700 non-fatal injuries. Large quantities of industrial chemicals were stored near residential areas without the knowledge of residents and regulators, and first responders entered the building without information about the type and amounts of chemicals stored. The Special Rapporteur called for tighter regulation and enforcement, highlighting the need for further realization of the right to information regarding hazardous substances.³¹

49. Many of the cases illustrate the challenge of securing an effective remedy, even in the clearest of correlations between business activities and impacts. In 1984, a toxic chemical leak killed over 6,000 people living near a toxic pesticide production facility in the town of Bhopal, India. Nearly 35 years after the disaster, the mandate holder continues to receive information on ongoing contamination of water and other resources. The inability of the community to gain access to an effective remedy and the impunity of various companies implicated in the disaster, including those that acquired the facility but deny any responsibility for the clean-up, is a seminal example of the exploitation of lower standards of protection in developing countries and the inordinate challenge facing victims to access an effective remedy.

50. The Special Rapporteur welcomed an announcement in 2014 by the Government of India that it would reconsider the official figures of people affected by the Bhopal disaster and provide additional compensation. However, financial compensation alone is not an effective remedy and will not stop the ongoing human rights violations resulting from Bhopal's toxic legacy. Information is provided regularly to the mandate holder of new victims of the Bhopal disaster who are born every day and suffer all their lives from adverse health impacts. The Special Rapporteur has called on all parties to ensure an effective remedy for the victims.³²

7. Manufacturing and consumer products

51. Concerns have also been raised regarding exposure to toxic chemicals in the context of the manufacture, use and disposal of common consumer products, such as electronics, clothing, cosmetics, cleaning products and detergents.

52. For example, after an 11-year campaign for justice and accountability by victims, their representatives and other human rights defenders, Samsung Electronics recently agreed to arbitration over the case of 150–250 deceased and sickened workers who allege their health has been affected by exposure to toxic substances in the manufacture of certain electronic products in the Republic of Korea.³³ Although a positive step, this is only one company in one industry in one country.

8. Nuclear radiation

53. A topic of concern under the mandate has been nuclear waste from military activities and energy production. The former Special Rapporteur undertook a mission

³⁰ United Nations Environment Programme, *Global Chemicals Outlook: Towards Sound Management of Chemicals* (Nairobi, 2013).

³¹ See <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gId=15347> and www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=16332.

³² See <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gId=19622> and www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=15335&LangID=E.

³³ See <https://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=23476&LangID=E>; see also A/HRC/33/41/Add.1.

to the Marshall Islands to examine contamination resulting from years of nuclear weapon testing (see A/HRC/21/48/Add.1). The current mandate holder has also addressed the issue during a recent country visit to Kazakhstan, where approximately 400 nuclear bombs were detonated during tests by the former Soviet Union (see A/HRC/30/40/Add.1 and A/HRC/30/40/Add.1/Corr.1).

54. Seven years after the nuclear disaster in Fukushima, Japan, actions for the reconstruction and revitalization of Fukushima are in full implementation process, with evacuation orders lifted for most of the areas. In March 2017, housing subsidies reportedly stopped to be provided to self-evacuees, who fled from areas other than the government-designated evacuation zones.

55. Following the nuclear disaster, Japan raised the acceptable level of radiation for residents in Fukushima from 1 millisievert a year (mSv/year) to 20 mSv/year. The universal periodic review mechanism of the Human Rights Council recommended that the Government of Japan return acceptable levels of exposure to those in place before the Fukushima disaster. The Special Rapporteur has raised concerns with the Government on both the situation confronting residents, including children and women of reproductive age, who may return to areas with levels of radiation above 1 mSv/year, as well as concerns regarding the exposure of workers involved in the remediation of the prefecture.³⁴ The death of a remediation worker from lung cancer was recently recognized as resulting from exposure to radiation.

9. Waste

56. The issue of waste disposal, particularly the export of waste from wealthy countries to poorer countries, is a core element of the mandate. Perhaps no case illustrates the incredible audacity of certain businesses to exploit vulnerable communities quite like the case of the vessel *Probo Koala*. The owners of the ship, essentially a manufacturing facility, contracted a company of no repute to dispose of its toxic waste because they could not find a suitable price in Europe. The waste was disposed of in and around the city of Abidjan, Côte d'Ivoire, during the night, killing nearly 20 people and leaving tens of thousands seeking medical help for their exposure (see A/HRC/12/26/Add.1).

57. The situation surrounding the export of end-of-life ships for recycling and disposal (shipbreaking) has been examined under the mandate for many years in previous reports and country visits (see A/HRC/12/26). For example, the European Union does not permit Titanic, toxic ships to be dismantled directly on their beaches by poorly equipped workers; but legal loopholes in the European Union regulation on ship recycling enable this double standard to be perpetuated in some of the world's poorest communities.

58. During a recent country visit to Denmark (see A/HRC/39/48/Add.2, forthcoming), the mandate holder was alerted to cases involving the Danish shipping company Maersk, which in the view of the Special Rapporteur was at one point among the leaders in responsible ship recycling. Several years ago the company had a policy prohibiting shipbreaking on beaches in Asia under abhorrent conditions, which it recently and unfortunately reversed for seemingly unjustified reasons. In a specific case, a United Kingdom-registered radioactive ship, the *North Sea Producer*, co-owned with the Brazilian company Odebrecht, arrived in Bangladesh via the United Kingdom

³⁴ See <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gld=23075> and <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gld=23923>. For replies from the State, see <https://spcommreports.ohchr.org/TMResultsBase/DownloadFile?gld=33521> and <https://spcommreports.ohchr.org/TMResultsBase/DownloadFile?gld=34302>.

for dismantling on beaches by poorly trained, equipped and monitored workers, posing a serious risk to the rights of local communities and workers.⁵⁵

59. The issue of urban landfills and the threats posed to life and health continues to also be raised with the mandate holder. During his mission to Sierra Leone, the Special Rapporteur was alarmed by the presence of a large landfill in the heart of Freetown, the most populated city of the country. He witnessed women and children, living inside the dump, eating meat from animals fed with potentially toxic waste; and the informal operations of waste pickers risking health and life to scale walls of waste to scavenge scraps for recycling and recovery. He encouraged the international community to support Sierra Leone to address the problems created by unsustainable global consumption and production patterns.⁵⁶

III. Implementing the Sustainable Development Goals and protecting human rights from toxic exposures

60. Among the Sustainable Development Goals, the issue of exposure to hazardous substances and wastes is present throughout the text, although not as prominently as one would expect given the magnitude of the issue. Hazardous substances and wastes are connected to all 17 of the Goals. For example, people in poverty (Goal 1) often bear the brunt of toxic pollution, and reductions in exposure are required to achieve health targets (Goal 3). Responsible consumption and production depend on reducing the release of chemicals and wastes into air, water and soil with an aim of minimizing their adverse impacts on human health and the environment (Goal 12) and safe work requires the protection of workers from occupational exposures (Goal 8). Goal 2 includes ensuring access to safe food and Goal 6 includes improving water quality by minimizing the release of hazardous chemicals and materials.

61. To achieve the Sustainable Development Goals, in particular to lower the burden of non-communicable diseases, States and businesses must prevent and minimize human exposure to hazardous substances. But beyond the Goals, protection against exposure is incumbent on all States under international human rights law. As described below, two opportunities exist for States to help ensure collective action.

A. Post-2020 framework for toxic chemicals and waste

62. As the rates of disease, disability and death attest, protection of human health from exposure to hazardous substances is a global challenge in urgent need of global action. Central to this is the global control of toxic chemicals and pesticides throughout their life cycle to protect human rights and ensure sustainability.

63. Efforts over the past several years have been largely confined to a set of narrow treaties for specific substances and stages of industrial activity. Over the years, global treaties for "chemicals and wastes" have evolved into the primary global instruments on environmental health in relation to pollution, toxic chemicals and wastes. There is ample room for their continued implementation.

64. However, even if fully implemented, the scope of existing global agreements on toxic substances is grossly inadequate to protect human health from the vast majority of hazardous substances of global concern. Less than 0.1 per cent of industrial and agricultural chemicals with known intrinsic health hazards are regulated through their

⁵⁵ See OHCHR communications database at <https://spcommreports.ohchr.org/TmsSearch/TMDocuments>.

⁵⁶ See www.ohchr.org/EN/Issues/Environment/ToxicWastes/Pages/Visits.aspx.

life cycle under these existing instruments.¹⁷ Even if the existing conventions were fully implemented, thousands of chemicals of global concern would not fall within their scope.

65. At the World Summit on Sustainable Development in 2002, States recognized the need for a framework at the global level to achieve the sound management of chemicals. The Strategic Approach to International Chemicals Management was established in 2006, intended to fill the protection gap left by the current patchwork of global treaties for chemicals and wastes, which omit thousands of hazardous substances. While some progress was made under the Strategic Approach, there appears unanimous agreement that we are a long way from achieving even the least ambitious definition of sound chemicals management.

66. There is an urgent need for a stronger, more comprehensive global framework to protect human health from a toxic environment to help address the injustices resulting from divergent standards of protection between countries. Solutions exist to eliminate and reduce exposure to toxic substances, but international cooperation and strong global standards are required to ensure that these existing opportunities ensure sustainable development and protect human rights.

67. The mandate of the Strategic Approach is set to expire in 2020. This presents an opportunity to craft a meaningful agreement on environment¹ health, protecting people from exposure to toxic substances found in contaminated water, food and air, as well as consumer products, such as furniture, cosmetics, building materials and toys. This opportunity is essential to the realization of numerous internationally recognized human rights.

68. The Special Rapporteur offers recommendations for the post-2020 framework (future framework) on toxic chemicals and waste that in his view would strengthen the ability of the global community to protect human rights from the effects of toxic exposures.

I. A requirement that States have effective national systems

69. Under the 2006 Dubai Declaration on International Chemicals Management, which forms part of the Strategic Approach, States, businesses and civil society all explicitly recognized that exposure to toxic chemicals and hazardous wastes is a human rights issue. They committed themselves to "respecting human rights and fundamental freedoms, understanding and respecting ecosystem integrity and addressing the gap between the current reality and our ambition to elevate global efforts to achieve the sound management of chemicals."

70. This important statement captures only one aspect of the State's duty under human rights law, namely the duty to respect human rights. However, the duty of States is not only to refrain from interfering with or curtailing the enjoyment of the multitude of human rights that may be affected by toxic chemicals and wastes, but also to actively protect those rights against violation or abuse by third parties, including businesses. This duty to protect human rights is clearly reflected in the Guiding Principles on Business and Human Rights, which were endorsed by the Human Rights Council in 2011.

71. Every State has an existing obligation under international law to have effective systems in place to protect people against toxic exposures. By virtue of their commitments under international treaties to protect the rights to life, health, safe

¹⁷ This represents a very conservative estimate based on existing classifications. Thousands of industrial chemicals have not been thoroughly assessed and classified for the health hazards they may present.

water and food, adequate housing and safe and healthy working conditions, among others, every State has an obligation to have systems that prevent and minimize exposure to toxic substances.

72. For example, over 190 States recognize the right to health in one or more human rights treaties.³⁸ Under this right, States have an obligation to take steps towards "the prevention and reduction of the population's exposure to harmful substances such as radiation and harmful chemicals ... that directly or indirectly impact upon human health."³⁹ Furthermore, States are required to adopt positive measures to protect the right to life,⁴⁰ including effective measures to prevent and safeguard against hazards that threaten the lives of human beings (see E/CN.4/Sub.2/1994/9 and E/CN.4/Sub.2/1994/9 Corr.1, para. 175). States must take all possible measures to reduce infant mortality and to increase life expectancy, especially in adopting measures to eliminate malnutrition and epidemics.⁴¹ The Convention on the Rights of the Child contains an explicit obligation on States to protect children's health from pollution and contamination.

73. Under the Strategic Approach, States, businesses, international organizations and civil society participants agreed upon a set of 11 basic elements of a national system for sound chemicals management to prevent and reduce exposure to toxic substances. These basic elements, including legislation, regulation and enforcement, are necessary to respect, protect and fulfil the rights to life and health, among others.

74. However, the policy framework of the Strategic Approach does not contain any obligation on States to have such systems in place, and many States still lack effective systems to protect life and health from toxic exposures. Such a national system is neither optional nor a luxury, but rather a necessary and fundamental duty of the State. The future framework for chemicals and wastes should contain a clear obligation on States to have effective systems in place to protect against toxic exposures.

2. A periodic review mechanism

75. Good governance is essential for environmental health at any level, and essential elements of good governance are the principles of transparency and accountability.⁴²

76. The Strategic Approach is rightly criticized for its unsatisfactory reporting and review mechanism of national efforts on sound chemicals management,⁴³ as "no institution is responsible for exercising strategic oversight and monitoring with respect to chemicals and waste management."⁴⁴ Statistics on reporting reveal limited reporting rates of States.⁴⁵ These weak reporting and review mechanisms prevent supervisory or oversight roles within the existing structure of the Strategic Approach

³⁸ International Covenant on Economic, Social and Cultural Rights, Convention on the Rights of the Child and the Constitution of WHO.

³⁹ Committee on Economic, Social and Cultural Rights, general comment No. 14 (2000).

⁴⁰ Human Rights Committee, general comment No. 6 (1982) on the right to life, para. 5.

⁴¹ See Human Rights Committee, general comment No. 6 (1982), para. 5. While the Committee states that it would be "desirable" for States to take all possible measures, the evidence is now much stronger that States must take all possible measures to respect, protect and fulfil

⁴² Tuula Honkonen and Sabaa A. Khan, *Chemicals and Waste Governance Beyond 2020: Exploring Pathways for a Coherent Global Regime* (Nordic Council of Ministers, Copenhagen, 2017), p. 32.

⁴³ Ibid., pp. 56 and 58.

⁴⁴ Ibid., p. 75.

⁴⁵ International expert and stakeholders workshop on integrated national implementation of the Sustainable Development Goals and international chemicals and waste agreements, presentation by Tatiana Terekhova, Carolyn Vickers and Brenda Koekkoek on indicators of progress and monitoring, Geneva, 11–13 April 2016.

in achieving the 2020 goal.⁴⁶ In part for the lack of accountability, States have been reluctant to commit substantial resources to the Strategic Approach since its inception in 2006.

77. Although sound chemicals management is a target under the Sustainable Development Goals, the review process of the Goals does not address the problem of insufficient oversight and monitoring for the Strategic Approach if it continues beyond 2020, or for any future framework for chemicals and wastes. There are concerns that the architecture for the follow-up and review of the Goals is based on voluntary national reviews and peer-reviewed soft guidance.⁴⁷ The process also has inadequate representation and participation of civil society, as government-appointed representatives primarily undertake reviews.⁴⁸ Furthermore, States do not benefit from country-specific recommendations, which could provide tailor-made suggestions on Sustainable Development Goal implementation and measures to improve chemicals management in light of national circumstances.⁴⁹

78. Further reinforcing the need for periodic reporting and review mechanisms is that international treaties to protect against exposure to hazardous substances and wastes lack effective reporting, compliance and review mechanisms. Many countries continue to fail to meet their reporting commitments.⁵⁰ It was noted recently that up to 60 per cent of States do not meet reporting requirements under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and the Stockholm Convention on Persistent Organic Pollutants.⁵¹ Neither the Stockholm Convention nor the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade has a compliance mechanism, and the Basel Convention requirements are considered weak.

79. A periodic assessment of efforts by States and non-State actors on chemicals management under a future framework for chemicals and wastes would help to ensure progress towards the sound management of chemicals, and thus to the realization of human rights and to the achievement of the Sustainable Development Goals.⁵² The existence of such an accountability mechanism under the future framework may help to mobilize resources from donors. However, an accountability mechanism necessitates the existence of clear obligations on States in the future framework on chemicals and wastes, such as obligations to have effective national systems in place, to submit national action plans and to provide periodic updates to review of national progress towards the sound management of chemicals.

80. In this regard, the Special Rapporteur believes a system similar to the universal periodic review of the Human Rights Council would be of great value to the future

⁴⁶ Center for Governance and Sustainability, University of Massachusetts Boston, "Options for effective governance of the beyond-2020 framework for sound management of chemicals and waste: lessons from other regimes", Strategic Approach to International Chemicals Management, second meeting of the intersessional process considering the Strategic Approach and the sound management of chemicals and waste beyond 2020, document SAICM/IP.2/INF.14, annex, p. 6, available at www.saicm.org/Portals/12/documents/meetings/IP2/IP_2_INF_14_Governance_CGS_1.pdf. See also Geneva Academy of International Law and Human Rights, research brief, May 2018, available at www.geneva-academy.ch/joomla-tools-files/docman-files/Research%20Brief%20I.economic,%20Social%20and%20Cultural%20Rights%20and%20SDGs.pdf.

⁴⁷ Ibid.

⁴⁸ Center for Governance and Sustainability, SAICM/IP.2/INF.14, annex.

⁴⁹ Geneva Academy, research brief, p. 3.

⁵⁰ United Nations, *Sustainable Development Goals Report 2017* (New York, 2017).

⁵¹ ChemicalWatch, "International treaties: monitoring compliance" (June 2015), available at <https://chemicalwatch.com/24151/international-treaties-monitoring-compliance>.

⁵² Honkaniemi and Khan, *Chemicals and Waste Governance Beyond 2020*, p. 32.

framework for chemicals and waste.⁵³ The universal periodic review is a unique, comprehensive and universal reporting and review process that involves an objective and non-confrontational review of all Member States' performance under several different human rights treaties, with an inclusive multi-stakeholder participatory approach.⁵⁴ Both the international regime for toxic substances and the one for human rights are similar in that they are each comprised of several individual international instruments with varying degrees of legal character. The creation of a periodic review under the future framework for chemicals and wastes could create synergies across various United Nations initiatives, including the follow-up and review mechanism of the Sustainable Development Goals.⁵⁵

81. Under a peer review process for chemicals and wastes similar to the universal periodic review, each State would declare actions taken to develop effective systems for toxic chemicals and wastes in meeting their international obligations.⁵⁶ States could report on actions taken towards reducing toxic exposure and other States and stakeholders may evaluate these steps and offer recommendations for improvement and follow-up.

82. While the universal periodic review is a State-driven peer review process, participation of various stakeholders, including non-governmental organizations and national human rights institutions, is considered a critical component of the mechanism. The review is based on three categories of documents: a national report by the State concerned, prepared through a broad consultation process at the national level with all relevant stakeholders; a summary of information concerning the State's interactions with treaty bodies and special procedures and contained in other relevant United Nations documents; and information from other stakeholders.⁵⁷ The participatory approach of the universal periodic review is highly compatible with the participatory nature of the Strategic Approach.

83. The universal periodic review has helped to strengthen national level coordination, through the involvement of various State entities in national coordination mechanisms for reporting and follow-up.⁵⁸ The success of the universal periodic review is shown through concrete results at national levels, where its recommendations feed into national development initiatives,⁵⁹ for example through legal reforms and national action or implementation plans.⁶⁰ Such coordination between governmental and non-governmental entities in various sectors, including health, trade, agriculture and the environment, is crucial for the protection of health and the environment from toxic substances.

⁵³ The idea was suggested by the Center for Governance and Sustainability in March 2018 (see SAICM/IP.2/INF.14, annex) and others. Regarding the application of a peer review under the Convention on Biological Diversity, see Ana Maria Ulloa, Kurt Jax and Sylvia I. Karlsson-Vinkhuyzen, "Enhancing implementation of the Convention on Biological Diversity: a novel peer-review mechanism aims to promote accountability and mutual learning", *Biological Conservation*, vol. 217 (January 2018), pp. 371-376.

⁵⁴ See Human Rights Council, universal periodic review, at www.ohchr.org/EN/HRBodies/UPR/Pages/UPRMain.aspx.

⁵⁵ Geneva Academy, research brief.

⁵⁶ See Human Rights Council, universal periodic review at www.ohchr.org/EN/HRBodies/UPR/Pages/UPRMain.aspx.

⁵⁷ Human Rights Council resolution 5/1, annex.

⁵⁸ Human Rights Council, thirty-seventh session, annual high-level panel discussion on human rights mainstreaming.

⁵⁹ Danish Institute for Human Rights, "Human Rights in Follow-up and Review of the 2030 Agenda for Sustainable Development" (Copenhagen, May 2016), p. 34.

⁶⁰ Human Rights Council, thirty-seventh session, annual high-level panel discussion on human rights mainstreaming.

84. Key outputs of the universal periodic review process are the conclusions and recommendations, as well as the voluntary commitments of the State concerned, which together contribute to national implementation strategies and provide a basis for improved performance nationally.⁶¹ These recommendations may identify key issues and provide guidance for implementation.⁶² They support follow-up because they address critical gaps in implementation emerging in the light of existing human rights obligations, national context⁶³ and political commitments through previous universal periodic review cycles.⁶⁴ As States are required to report on steps taken to implement previous recommendations, the periodic review process promotes progressive development in the areas identified for further action. The future framework for chemicals and waste should accommodate a structure that allows for State-specific recommendations.

85. The universal periodic review system does not explicitly include responsibilities of businesses to respect human rights. However, while implementation of recommendations under the review primarily rests with the State, relevant stakeholders also have a responsibility to implement relevant commitments.⁶⁵ This allows for provision for responsibilities of businesses related to the State in question, including those in relation to exposure to toxic chemicals, which could benefit from emphasis in such an accountability mechanism.

3. An updated definition of a chemical of "global concern"

86. Today, chemicals of global concern are those toxic industrial chemicals and hazardous pesticides used, produced and released by global supply chains. States should recognize that a "chemical of global concern" includes the full life cycle of toxic substances used, produced and released by global supply chains, in addition to those that travel significant distances through the environment and migratory species.

87. The production, use and release of toxic substances in global supply chains are resulting in transboundary impacts. Industrial chemicals are often used in international supply chains to manufacture products for export, such as textiles, electronics, furniture and building materials, and hazardous pesticides applied to produce food and other products for consumption in other countries. These industrial chemicals and pesticides themselves are often traded across borders. And they are often the toxic by-products of consumption and production, whether from the extraction of natural resources such as metals, minerals and petroleum, energy generation or waste disposal.

88. However, the vast majority of toxic chemicals with transboundary impacts are excluded from consideration under global measures because they do not travel long distances through environmental media. For example, the criteria for listing a substance under the 2001 Stockholm Convention necessitate evidence of long-range environmental transport through wind, water or migratory species.⁶⁶ As a result, perhaps thousands of toxic substances that do not easily degrade, accumulating in people and wildlife, are excluded from the scope of the Convention. Many of these substances pose a serious and unnecessary threat to numerous human rights. A similar,

⁶¹ See Human Rights Council resolution 5/1, annex, paras. 1 and 4. See also Geneva Academy, research brief, p. 3.

⁶² OHCHR, "Human rights, the SDGs and the 2030 Agenda for Sustainable Development", available at www.ohchr.org/Documents/HRBodies/UPR/SDGs_2030_Agenda.pdf.

⁶³ General Assembly resolution 60/251, para. 5 (e) and Human Rights Council resolution 5/1, para. 3.

⁶⁴ Human Rights Council, thirty-seventh session, annual high-level panel discussion on human rights mainstreaming.

⁶⁵ Human Rights Council resolution 5/1, annex, para. 33.

⁶⁶ Stockholm Convention, annex D.

narrow interpretation of what constitutes a substance of global concern was recently articulated in the 2013 Minamata Convention on Mercury.⁶⁷

89. This woefully outdated and narrow perspective of what constitutes a chemical of global concern is enabling the exploitation of workers and local communities, particularly in developing countries and emerging economies that produce much of the products that the world consumes. Complex and opaque global supply chains continue to exploit lower standards of human health and environmental protection, leading to rampant abuses of human rights.

4. A mechanism to phase-out chemicals of global concern

90. Duties and responsibilities to prevent exposure to toxic substances extend beyond borders. The transboundary transfer of toxic production and disposal to countries with lower levels of protection should be considered a form of exploitation if reasonable measures are not taken to protect those at risk.

91. Reasonable measures include global standards for the production, use and disposal of hazardous substances. However, States have intentionally excluded many chemicals of concern from the scope of existing treaties, preventing the development of global standards for thousands of toxic substances that remain in use around the world. This has enabled the transboundary transfer of toxic production and disposal to countries with lower levels of protection, creating costly challenges for States and businesses to trace supply chains to ensure that the rights of workers and communities are not abused by exposure to toxic substances.

92. There are grave concerns that various companies are exploiting workers and particularly children in some countries by exposing them to toxic risks they would not allow for workers back home. Exposing children to toxic substances at work is indefensible. States are obliged to take reasonable measures to prevent and minimize exposure to toxic substances that occur outside their territories and that give rise to infringements of applicable rights owing to the activities of business entities over which they can exercise control and that are reasonably foreseeable.⁶⁸ There are numerous toxic substances that should be subject to global bans or restrictions and which, though with well-characterized risks to life, health and development, are still produced and used in global supply chains, despite the availability of safer alternatives. An international instrument should be developed to phase out these chemicals of global concern.

93. Special Rapporteurs have called for the creation of a treaty to prohibit the production and use of certain substances and classes of substances that present serious and in many cases unnecessary risks. For example, the Special Rapporteur on the right to food and this mandate holder, in their report on the impacts of pesticides in food and agricultural production on workers and communities, concluded that the international community must work on a comprehensive, binding treaty to regulate hazardous pesticides throughout their life cycle, taking into account human rights principles (see A/HRC/34/48). They recommended that such an instrument should: (a) aim to remove existing double standards among countries that are particularly detrimental to countries with weaker regulatory systems; (b) generate policies to reduce pesticide use worldwide and develop a framework for the banning and phasing-out of highly hazardous pesticides; (c) promote agroecology; and (d) place strict liability on pesticide producers (ibid). This mandate holder and his predecessor have also urged the global community to develop a global treaty for toxic industrial

⁶⁷ Minamata Convention, preamble

⁶⁸ Committee on Economic, Social and Cultural Rights, general comment No. 24 (2017), paras. 30–32.

chemicals (see, for example, A/HRC/21/48, A/HRC/36/41/Add.1, A/HRC/33/41/Add.2 and A/HRC/39/48/Add.2 (forthcoming)).

94. States should seize the opportunity of ongoing discussions to develop a new global instrument by 2030 that would ensure that chemicals of global concern are identified and the process of phase-out or effective restriction has begun.

5. Greater attention to both the gendered impact of exposure to toxic substances and its disproportional impact on children

95. Equality and non-discrimination are fundamental to human rights law.⁶⁹ All human beings are equal and by virtue of this and the inherent dignity of each person, all must have equal protection from toxics. States have elevated duties to protect those who are disproportionately affected by toxic exposures under international human rights law.

96. Biological differences between men and women, such as physiological and hormonal differences, create differing susceptibilities to the effects of exposure to toxic chemicals.⁷⁰ Women are more likely to store higher levels of environmental pollutants in their tissues than those found in men. During pregnancy, lactation and menopause, women's bodies undergo changes that may increase their susceptibility to health impacts from toxic exposures. Furthermore, owing to differences in social roles, including occupational and household roles, and prevailing harmful gender stereotypes, women and men are exposed differently to toxic chemicals with respect to, among other things, the substances encountered and the degree of exposure.

97. The age at which one is exposed to toxic substances is a critical factor in whether the exposure may result in adverse health impacts. Childhood exposure to toxics is interrelated with the gender dimension of the issue.

98. The future framework for chemicals and wastes should have a special focus on the gendered impact of exposure and on childhood exposure. It may wish to create specific obligations for States to take expedited action on well-characterized threats to life and health regarding children and different genders, without waiting for the development of national, regional or global mechanisms to phase out such threats, such as lead in paint.

B. Business and human rights initiatives

99. For over 23 years, under this mandate grave allegations of human rights violations and abuses due to business activities have been received and responded to. Most of these have transnational links, and most are — unsurprisingly — abuses of the rights of the most vulnerable, including the poor in countries of all levels of development; indigenous peoples; women and children; and migrants and minorities, among others.

100. A common denominator under many emblematic business and human rights cases is toxic pollution and contamination, which have traversed the life cycle of hazardous substances, implicating sectors from extractive industries, to the manufacturing of industrial chemicals, pesticides and consumer products, food and agricultural production, energy generation, transportation and waste disposal, among others. These cases have often illustrated accountability gaps for victims; but, in virtually every case, the tragedy has equally illustrated the gross failure of States and businesses to prevent violations and abuses.

⁶⁹ See, for example, the Universal Declaration of Human Rights, art. 2.

⁷⁰ United Nations Development Programme, "Chemicals and gender", Gender Mainstreaming Guidance Series (February 2011).

101. Since 2015, all of the reports under this mandate to the Human Rights Council discuss the duties and responsibilities of States and businesses regarding toxic chemicals, pollution and other hazardous substances and wastes. In the same vein, the principles on protecting workers from toxic exposures, which the Special Rapporteur proposed in his 2018 report, are intended for use in various discussions on business and human rights, as well as discussions in other forums.

102. There is an increasing number of efforts to compel businesses to conduct human rights due diligence. Following the endorsement of the Guiding Principles on Business and Human Rights in 2011, France has made human rights due diligence mandatory, while many other countries have adopted national action plans encouraging businesses to carry out human rights due diligence.⁷¹ There are also efforts driven by business associations through their internal processes calling for their members to put in place human rights due diligence, thereby supporting State-led initiatives in this direction.

103. Despite these efforts, many industries have not adequately implemented the Guiding Principles on Business and Human Rights with respect to toxic chemicals and pollution. Some major chemical industry associations and several of their member companies have not implemented such a requirement as part of a commitment to responsible care, despite its outgrowth from a seminal case of a human rights violation, the 1984 tragedy in Bhopal, India. In the course of meeting with businesses during country visits during the past four years, the Special Rapporteur has only personally encountered one chemical company undertaking human rights due diligence.

104. Various industry-wide initiatives across a number of industries and sectors are provided by companies in response to communications about alleged human rights abuses and violations. These are presented as being equivalent to human rights due diligence. Some have elements that have considerable merit and are commendable. However, the majority of these initiatives follow neither the letter of the Guiding Principles on Business and Human Rights nor the spirit of human rights in general. Many do not adequately consider toxic chemical and pollution related risks.

105. In July 2018, an intergovernmental working group established by the Human Rights Council produced a zero-draft of a new treaty to "regulate, in international human rights law, the activities of transnational corporations and other businesses." This is a welcome development from the perspective of the mandate holder, which may help to address some of the impacts of toxic chemicals in global supply chains and the systemic challenges facing victims who struggle to access an effective remedy.

106. Studies suggest that only the smallest fraction of victims of exposure to hazardous substances have access to remedies (see A/HRC/39/48). Major obstacles to accountability and remedy include the unreasonably high burden of proof, the long latency periods for consequences to manifest in some cases and the difficulty in establishing causation; substantial information gaps with respect to the identification of hazards, measurement of exposure and specification of the epidemiological impacts; possible exposure to a multitude of different substances in various occupational settings and over a working lifetime; and the provisions of contractual relationships between suppliers and purchasers which can shift responsibility up or down a supply chain.

107. Far too many countries rely to an unreasonable extent on the prospect of legal liability and reputational damage to prevent and mitigate harm from toxic exposures resulting from business activities. However, a "damage and sue" model of

⁷¹ Working Group on the issue of human rights and transnational corporations and other business enterprises, informal note, available at www.ohchr.org/Documents/Issues/Business/Session18/CompilationNAPReferencesToDd%20Diligence.pdf.

enforcement is not human rights prevention. Far too often, penalties and fees for violations simply amount to a cost of doing business, not prevention.

108. Solutions exist to make tremendous advancements in reducing the burden of disease through the prevention of exposure, which is required to realize the rights to life and health, among others. States are failing to sufficiently compel businesses to adopt safer alternatives, instead enabling companies to exploit the most vulnerable, such as women and children, particularly those living in poverty, to the cruelty of unnecessary and unjustifiable exposure to toxics and the suffering that it brings.

109. States should compel all businesses in their territory or jurisdiction to actively monitor, identify and prevent human rights violations. Compliance with the law alone should not be viewed as sufficient for the risks businesses create of exposure to hazardous substances. Legislation for toxic chemicals and pollution in general continues to lag behind the pace of innovation and economic expansion, resulting in many of the grave impacts described above. Traceability and transparency are crucial elements of human rights due diligence, and must be ensured throughout supply and value chains. Furthermore, States should ensure that human rights due diligence includes toxic chemical and pollution risks.

IV. Conclusions and recommendations

110. A broader, more detailed discussion is needed on human rights and exposure to hazardous substances, bringing in all relevant considerations, including ethical and medical perspectives. The Special Rapporteur aims to help to develop a more robust discussion on what is an acceptable level of exposure in the coming years.

111. The global community should adopt an international instrument to prevent and minimize toxic exposures. Such an instrument could be under the "post-2020 framework for chemicals management." It should contain:

- (a) A definition of a substance of global concern based on presence in global supply and value chains;
- (b) An explicit obligation on every State to have effective systems to prevent and minimize toxic exposures;
- (c) A universal periodic review or other mechanism of State efforts to prevent and minimize toxic exposures;
- (d) A mechanism to phase out chemicals of global concern;
- (e) Obligations for States to take expedited action on well-characterized threats to life and health regarding children and different genders.

112. States should support and actively engage in the development of legally binding instruments on businesses at the national, regional and global levels. The Special Rapporteur encourages:

- (a) States to compel businesses to include toxic chemicals and pollution risks in their human rights due diligence to identify, monitor, prevent and mitigate impacts on human rights;
- (b) Inclusion of the proposed principles in the Special Rapporteur's 2018 report to the Human Rights Council on workers' rights.